

CHAPTER 2

Project Description

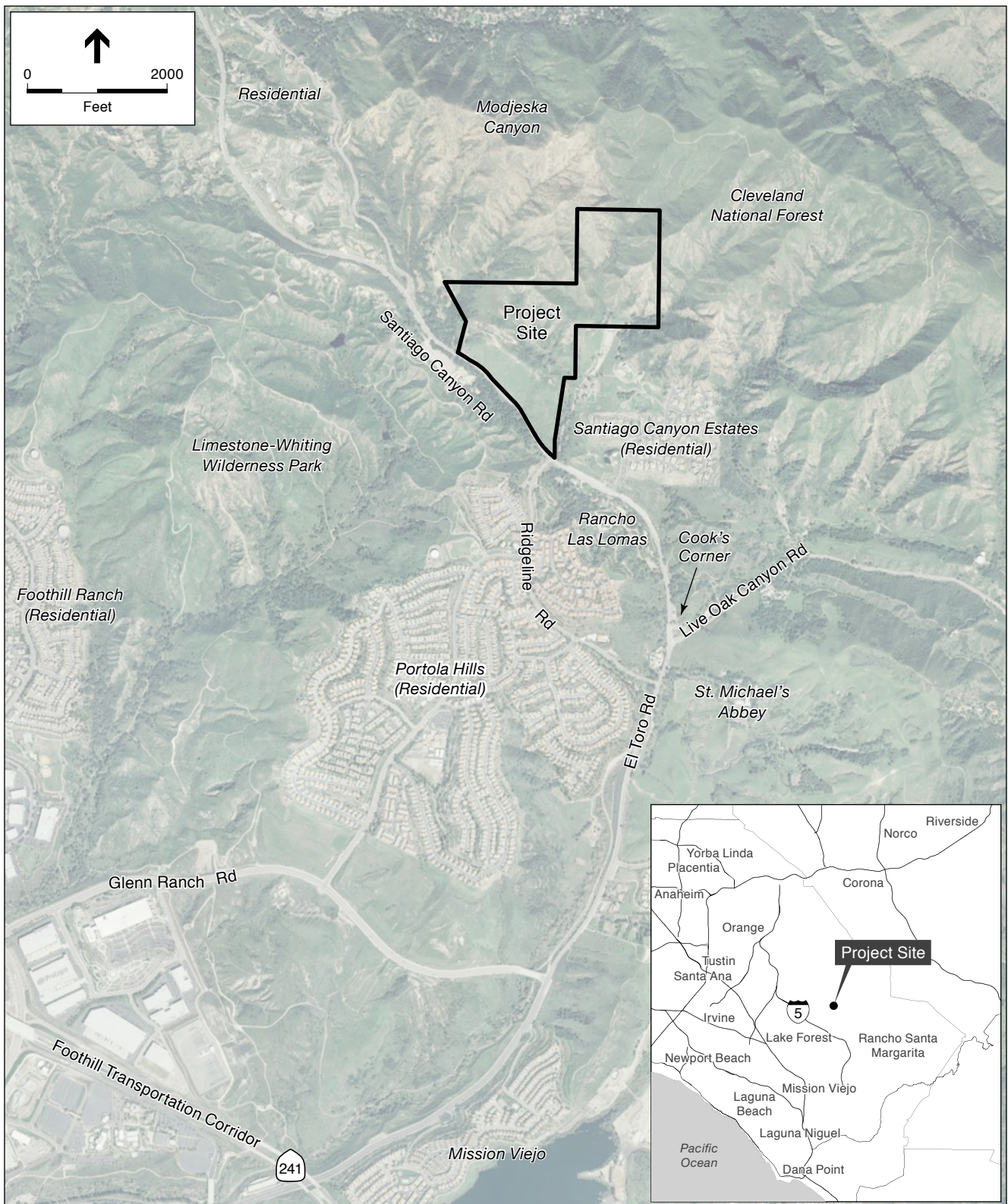
2.1 Project Background

The Saddle Crest Homes project includes the development of 65 single-family homes on an approximately 113.7-acre site in unincorporated Orange County (see **Figure 2.1**). Saddle Crest Homes was originally part of a larger project that included (non-contiguous) areas known as Saddle Creek North and Saddle Creek South, which included development of 162 dwelling units. On January 28, 2003, the Orange County Board of Supervisors approved the similar, but larger, project. In addition to the approximate 113.7-acre Saddle Crest project site, the previous project approval included the 402.5-acre Saddle Creek North project site (which included the Watson parcel) and the 83.6-acre Saddle Creek South project site (see **Figure 2.2**). Actions taken by the Board of Supervisors for the previous project included:

1. Approval of Area Plan 99-07 for Saddle Crest and Area Plan 99-03 for Saddle Creek
2. Certification of Environmental Impact Report No. 578
3. Approval of a zone change to amend the F/TSP

Subsequent to the approval by the Board of Supervisors, the EIR was challenged, and ultimately, the Fourth District Court of Appeal of the State of California overturned the decisions of the Board of Supervisors in the case of *Endangered Habitats League, Inc. vs. County of Orange*, (2005) 131 Cal. App. 4th 777 (Court of Appeals Case Nos. G034416 and Superior Court Cases 03CC00065, 03CC00070, and 03CC00563).

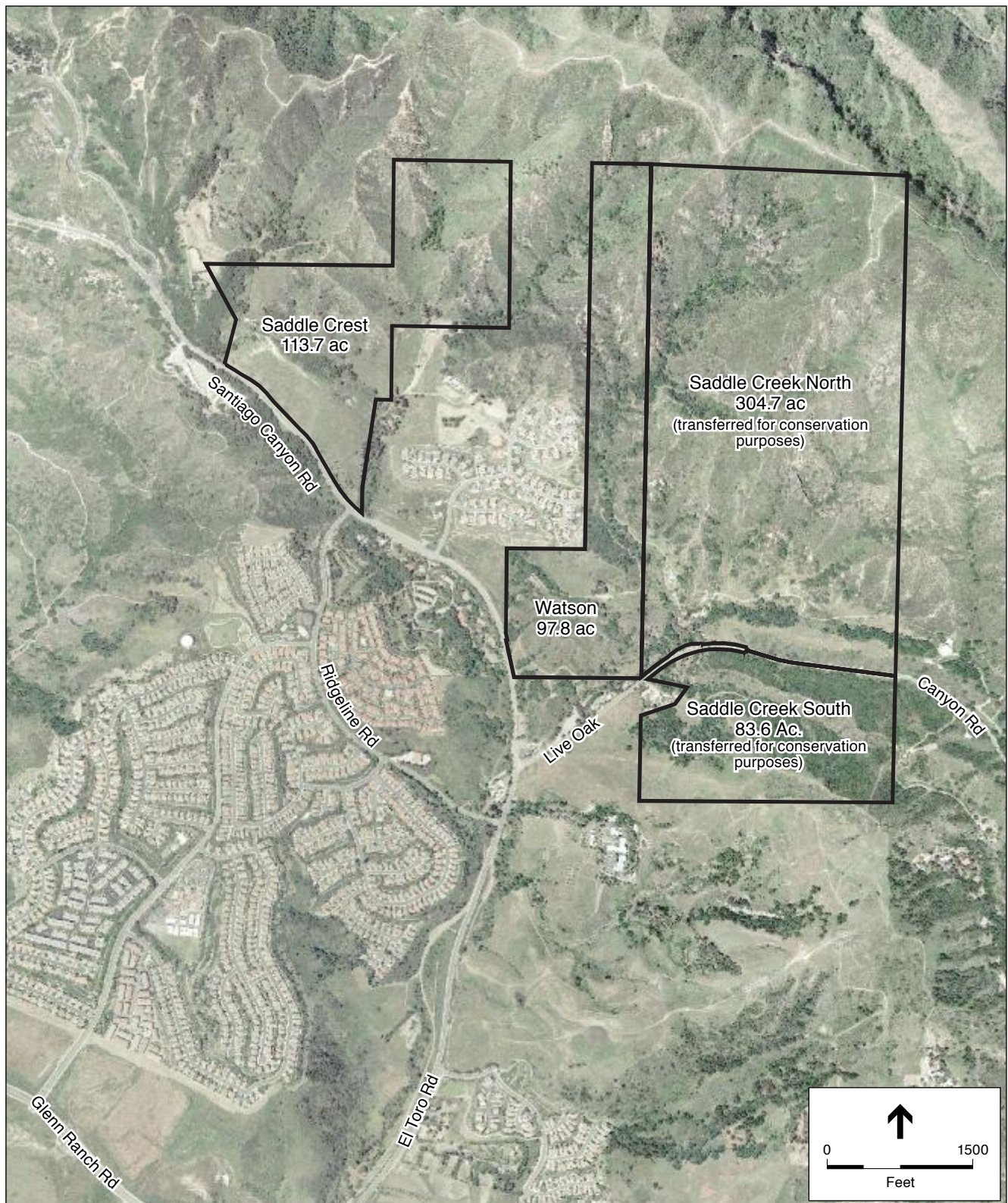
Since that time, a 304.7-acre portion of the Saddle Creek North project site was transferred in December 2008 to The Conservation Fund, a non-profit entity whose purpose is land and water conservation. Additionally, the 83.6-acre Saddle Creek South project site was transferred in April 2011 to OCTA for conservation purposes (under its freeway improvements mitigation program) and is no longer part of the project. The remaining 97.8 acres of Saddle Creek North, known as the Watson parcel (see Figure 2.2), is not included in the development application with the Saddle Crest site. It is, however, reasonably foreseeable that it could be developed in the future consistent with land use and zoning designations. Therefore, development of the Watson parcel is considered in the cumulative analysis of this EIR. The Saddle Crest Homes Area Plan provides a detailed history of the project and is provided in Appendix B of this Draft EIR.



SOURCE: ESA; GlobeXplorer, 2011.

Saddle Crest Homes . 211454

Figure 2.1
Project Location Map



SOURCE: Hunsaker & Associates, 2012.

Saddle Crest Homes . 211454
Figure 2.2
 Previous Project Sites

2.2 Project Location

The project site is located in unincorporated Orange County north of the junction of Live Oak Canyon Road with El Toro Road and east of Santiago Canyon Road (see Figure 2.1). Regionally the project site is located in the southern/eastern portion of Orange County, within the northern boundary of the F/TSP. A portion of Santiago Canyon Road adjacent to the project site is located within the City of Lake Forest. The cities of Mission Viejo and Rancho Santa Margarita are located to the south.

Land uses adjacent to the project site are shown on Figures 2.1 and 2.2, and are described below:

- **North:** Cleveland National Forest and other open space are adjacent to the project site along the northern boundary.
- **East:** Santiago Canyon Estates (a residential development with 78 homes) is located generally east of the project site; farther east is the Watson parcel (a 97.8-acre parcel designated for 48 units under the F/TSP) and the Saddle Creek site. To the southeast is Cook's Corner and St. Michael's Abbey along Live Oak Canyon Road and El Toro Road, respectively.
- **South:** The proposed project is bounded on the south by Santiago Canyon Road and the northern limits of the City of Lake Forest with Limestone-Whiting Wilderness Park located generally southwest of the project site. Rancho Las Lomas, a conference center and special events facility, located southeast of the project site, is accessed from the south side of Santiago Canyon Road (across from the entrance to Santiago Canyon Estates). Portola Hills (a 349-acre, 2,181-dwelling-unit residential community) is situated generally south of the project site beyond Santiago Canyon Road.
- **West:** An existing residential estate is generally located along the western boundary of the project site. Further west is a small residential development, located along the north side of Santiago Canyon Road, and Limestone-Whiting Wilderness Park is located on the south side of Santiago Canyon Road.

2.3 Site Characteristics

The project site is located within the foothills of the Santa Ana Mountains, which include rugged terrain and prominent ridgelines, oak woodlands, diverse vegetation, and scenic vistas. The topography of the project site is generally moderately steep ridges and narrow valleys and canyons. Slopes exceed 35 percent over about 60 percent of the project site. The highest point is at an elevation of about 1,800 feet on a ridge at the northeast corner of the site and the lowest point is at an elevation of about 1,200 feet at the southeastern tip of the parcel. There are no major ridgelines, as defined in the F/TSP, on or within 50 vertical feet or 200 horizontal feet of the project site.

A north-south trending, blue line stream traverses the eastern portion of the project site. The site drains in a series of isolated canyons that flow through the site primarily in a southeasterly

direction and ultimately collect near the southeast corner of the property, south of Santiago Canyon Road.

The project site is diverse and includes flat grasslands to steep, densely-vegetated slopes. The project site also includes coast live oaks and sensitive plant species. Disturbance due to grazing is evident within the lower elevations of the southern portion of the project site, in addition to disturbance from the 2007 wildfire that impacted the site. There are no residential structures within the property boundary.

The site is designated as *Suburban Residential* by the Orange County General Plan. The project site lies within the UAR District in the northwestern portion of the F/TSP.

2.4 Project Objectives

The following objectives have been established by the applicant to serve as a basis for comparing the alternatives, and for the evaluation of associated environmental impacts. The following applicant objectives are applicable to both the proposed project and the non-clustered scenario:

1. To develop a residential community that is consistent with the goals of the F/TSP.
2. To incorporate advances in environmental planning, including biology and hydrology that have occurred since adoption of the F/TSP.
3. To provide for development at the density allowed by the F/TSP in a manner that maximizes protection of significant biological resources.
4. To mitigate impacted resources through on-site and/or off-site mitigation measures to the satisfaction of the County of Orange, and federal and state agencies with authority to issue permits and other approvals for the project.
5. To implement a mitigation program for biological impacts designed to achieve long-term success and biological viability.
6. To respond to regulatory changes and changes in regulatory review authority that have occurred since the adoption of the F/TSP.
7. To implement a residential development that is not only compatible with but also complementary to the development that characterizes the area.
8. To build a residential project that incorporates and implements a fire-safe design which protects the proposed homes and future residents from wildland fire.

2.5 Project Characteristics

Proposed Project

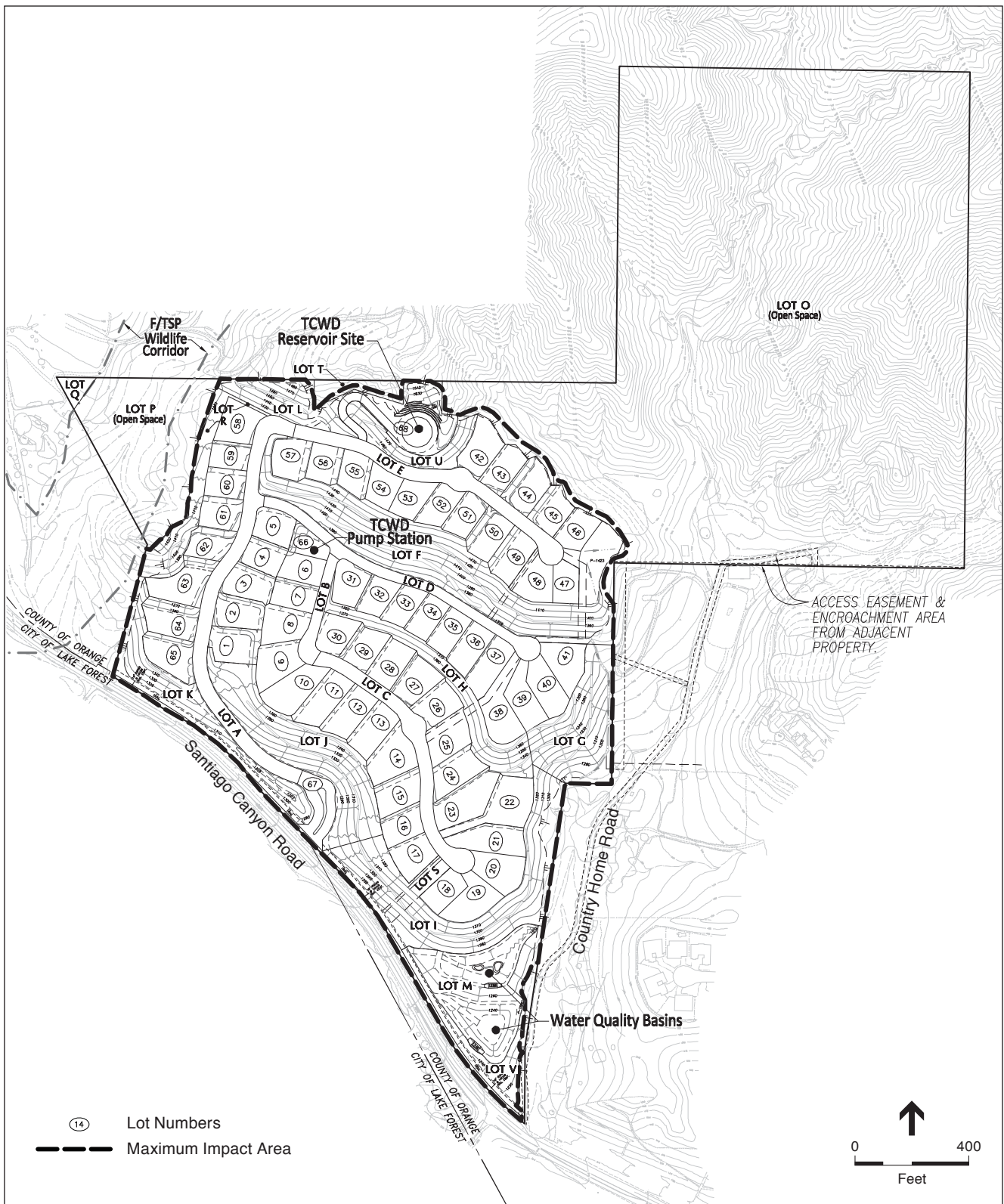
As discussed in the Area Plan (see Appendix B), the Saddle Crest project has been designed to incorporate progressive and advanced environmental planning principles, which include:

- Ecosystem planning, which preserves a large block of open space that is contiguous to other large blocks of open space, thereby providing greater connectivity and linkages to foster wildlife movement.
- Oak tree mitigation which relies on preservation/restoration/enhancement of on-site oak groves through sustainable tree plantings (as well as native tree planting), rather than one which relies on the transplantation of trees.
- Wildland planning which utilizes the most sophisticated fire behavior modeling available to provide for the safety of residents and to minimize the impact to adjacent wildlands, by limiting the fire break/fuel break impacts that result from the creation of single defensible location for Saddle Crest homes.
- Water quality and hydromodification considerations that emphasize the project's infiltration capacity along with low impact development techniques and preservation of natural processes within drainages for water treatment.

The proposed project includes the development of 65 single family homes on lots with an average size of over 17,000 square feet on the approximately 113.7-acre site. The homes proposed under the proposed project would be semi-custom, and it is anticipated that they would be developed/constructed in groups of 15 until the project site is built out, beginning in the southern portion of the site, near the entrance on Santiago Canyon Road. As shown on **Figure 2.3**, the proposed project focuses development on the portion of the project area contiguous to Santiago Canyon Road and concentrates open space on the remainder of the project site to create a buffer between residential uses, and the canyon areas and Cleveland National Forest to the north, thereby reducing or avoiding potential environmental impacts. In so doing, the proposed project requires amendments to the F/TSP.

As shown in **Figure 2.4**, 70 percent (79.8 acres) of the project site is proposed to remain open space (including remedial grading, revegetated areas, landscaped slopes, water quality basins, and fuel modification zones). The project includes dedication of approximately 51 acres of the northeastern portion of the site to the County for open space purposes, and a conservation easement may be placed over this open space area. In addition, the proposed project would avoid development within an approximate four-acre wildlife corridor in the northwestern portion of the project site, which would be offered for dedication to the County for open space preservation.

As shown on **Figure 2.5**, total impacted areas associated with project development would be approximately 62.7 acres. Of that total disturbed area approximately 4.2 acres would be associated with fuel modification zones beyond the approximate limits of remedial grading.








SOURCE: Hunsaker & Associates, 2012.

Saddle Crest Homes . 211454

Figure 2.3
Proposed Project

Open Space Summary

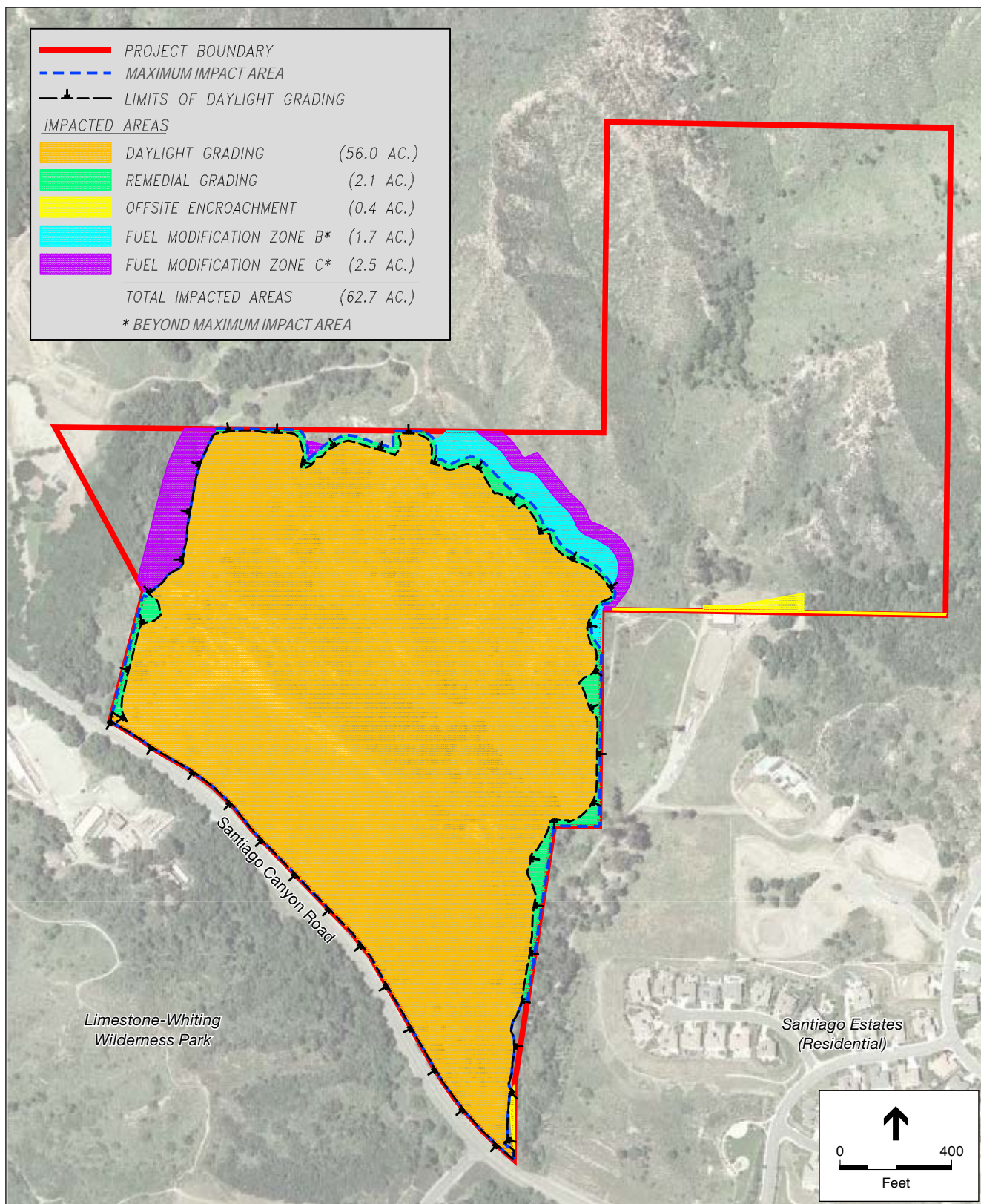
	<u>ACREAGE</u>	<u>% OF SITE</u>
 DEDICATED OPEN SPACE	51.0 AC.	44.9%
 REVEGETATED/GRADED OPEN SPACE	0.6 AC.	0.5%
 FUEL MODIFICATION OPEN SPACE	25.3 AC. *	22.3%
 WATER QUALITY OPEN SPACE	2.3 AC.	2.0%
 EQUESTRIAN TRAIL OPEN SPACE	0.6 AC.	0.5%
TOTAL OPEN SPACE	79.8 AC.	70.2%
RESIDENTIAL AREA	26.0 AC.	22.9%
RESERVOIR SITE & PUMP STATION	1.1 AC.	0.9%
STREETS & GUARD GATE	6.4 AC.	5.6%
OFFSITE ENCROACHMENTS/EASEMENTS	0.4 AC.	0.4%
TOTAL SITE AREA	113.7 AC.	100%

* 4.2 OF FUEL MODIFICATION ACRES ARE OUTSIDE THE LIMITS OF GRADING.



SOURCE: Hunsaker & Associates, 2012.

Saddle Crest Homes . 211454
Figure 2.4
 Proposed Open Space



SOURCE: Hunsaker & Associates, 2012.

Saddle Crest Homes . 211454

Figure 2.5
 Proposed Project
 Grading Impact Areas

The proposed project includes a monument at the entrance shown in **Figures 2.6 and 2.7**. A proposed landscape plan for the project is shown in **Figure 2.8**. The primary trees proposed in the landscape plan include oaks, California laurel, sycamores and walnut. Accent and understory trees include Western Redbud, arbutus, and elderberry. Shrubs proposed would be natives mixed with a variety of low-growing, drought tolerant varieties. Radiant heat walls would be provided as shown in Figure 2.8 that would be constructed of a combination of block and glass, and would avoid unintended access to adjacent properties.¹

The interior road system for the proposed project is shown on **Figures 2.9 through 2.11**. Access to the site would be from Santiago Canyon Road, and as part of the proposed project, improvements would be constructed to allow for safe ingress and egress from the project site in consideration of Santiago Canyon Road's design speed. As shown in Figure 2.10, improvements would include:

- An exclusive northbound right turn pocket;
- A northbound acceleration lane for merging traffic from the project entry;
- One exclusive southbound left turn pocket; and
- One westbound right-turn lane and one westbound left-turn lane for traffic exiting the project site.

The entry passage feature would be located at a distance that would meet or exceed the County's 100-foot standard from the entry road's intersection with Santiago Canyon Road. Two entry and exit lanes would be provided for stacking. Interior streets would be designed to incorporate rural street standards with no sidewalks and rolled curbs in order maintain the rural character of the proposed project (see Figure 2.11).

The Santiago Creek Riding and Hiking Trail traverses adjacent to the project site along Santiago Canyon Road. As shown in **Figure 2.12**, the trail segment adjacent to the project site would be provided as part of the proposed project. The proposed project would maintain the existing bi-directional Class II Bikeway (on road striped lanes with parking prohibited) within Santiago Canyon Road. The Santiago Creek Riding and Hiking Trail (as designated on the County's Master Plan of Regional Riding and Hiking Trails) traverses adjacent to the Regional bikeway on the east side of Santiago Canyon Road. The trail segment within the project site would be provided as part of the proposed project.

The proposed project includes two detention basins located at the southeast corner of the site (see Figure 2.3). The developed portion of the project site would route conveyed flows through storm drain facilities to a dry extended detention water quality basin. A second hydromodification detention basin with storm flow storage capacity and a controlled outlet would help reduce runoff velocities and volume at discharge. Additionally, the hydromodification basin would include a weir structure to help mimic the project site's natural drainage condition to mitigate potential impacts to downstream drainages.

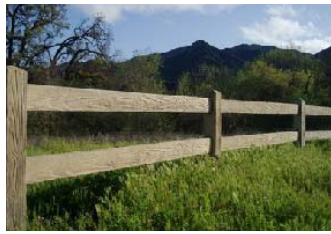
¹ Radiant heat walls have been specified for Lots 20-22, 40-47, and 58-65 on the approved Precise Fuel Modification Plan. These walls, which are constructed of tempered glass (or equal) and slump block, provide protection for the homes from radiant heat originating in the adjacent wildlands.



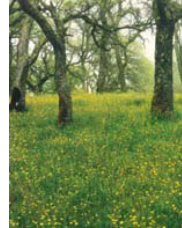
DRY STREAM BEDS



SPLIT RAIL 'TRAIL' FENCE



STONE WALLS



OAK WOODLAND PLANTING CONCEPT



SADDLE CREST ENTRY PLAN VIEW

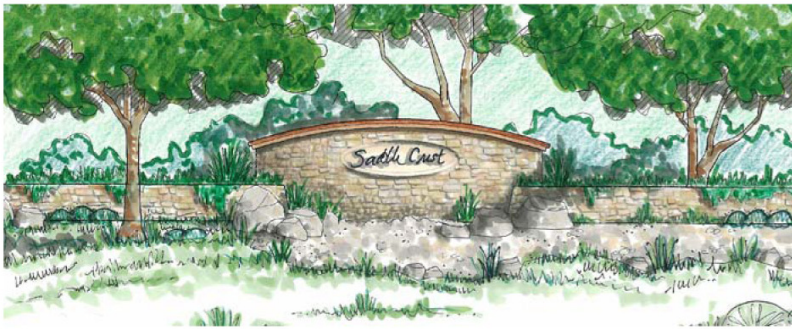
SOURCE: L.A. Group Design Works, 2012.

Saddle Crest Homes . 211454

Figure 2.6
Proposed Entry



(A) SECTION OF ENTRY GATES



PROJECT MONUMENT WALL ELEVATION



(B) MONUMENT WALL SECTION



(C) SECTION FROM SANTIAGO CANYON ROAD TO ENTRY DRIVE

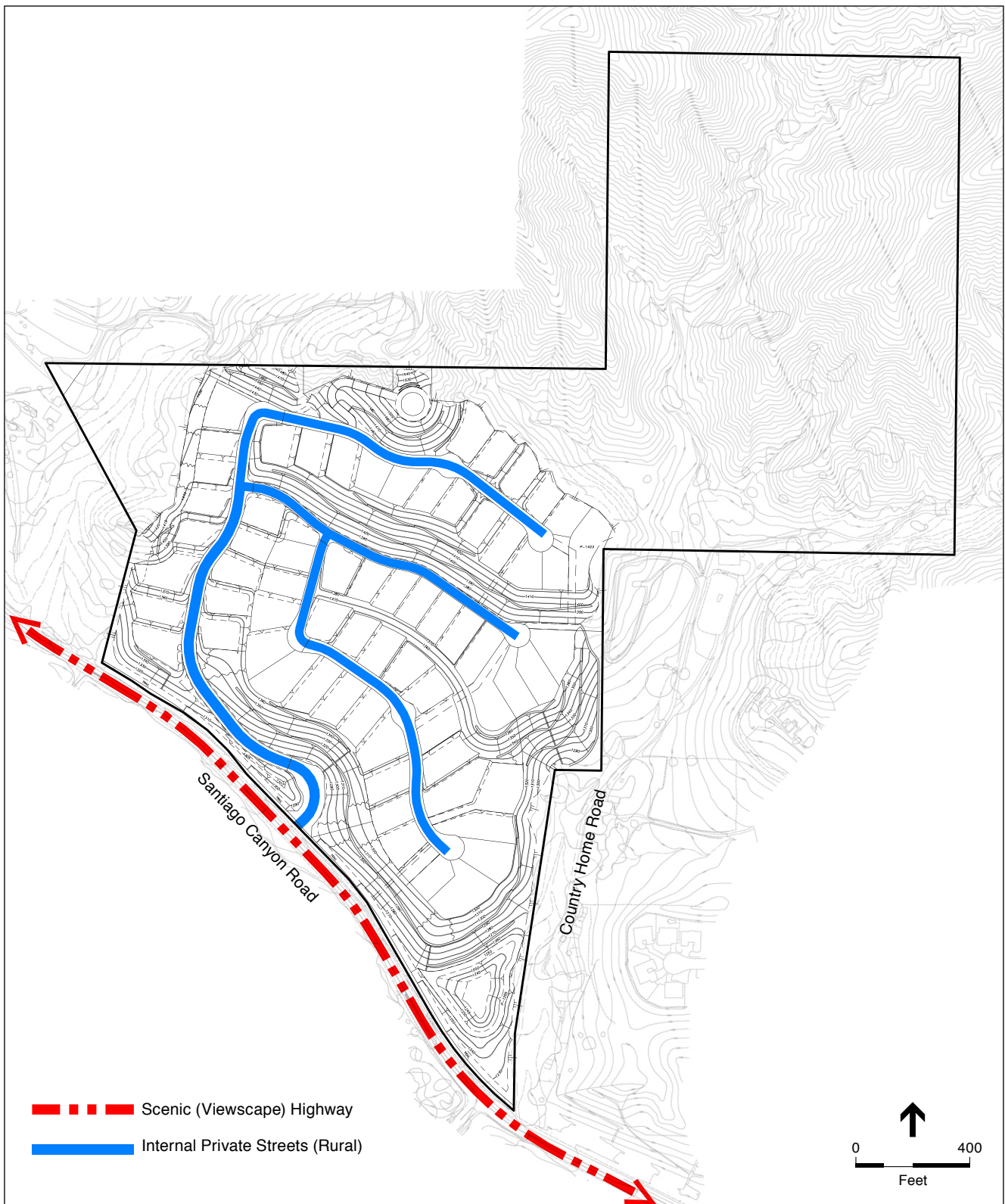
Landscape Legend

- COMMUNITY LANDSCAPE AREA
MAINTAINED BY THE HOA WITH COMMON IRRIGATION SYSTEM PROVIDED. ALL PLANT MATERIAL WITHIN THIS AREA SHALL BE NATIVE AND/OR DROUGHT TOLERANT FROM FTSP PLANT PALETTE.
- HOMEOWNER MAINTAINED LANDSCAPE AREA
MAINTAINED BY THE PRIVATE HOMEOWNER. GRADED SLOPE AREAS ON HOMEOWNER'S LOT
- WATER QUALITY CONTROL BASIN LANDSCAPE AREA
MAINTAINED BY THE HOA. ALL PLANT MATERIAL WITHIN THIS AREA SHALL BE RIPARIAN NATIVES AND FROM APPROVED OCFA PLANT PALETTE.
- COMMUNITY ENTRY LANDSCAPE AREA
ENHANCED LANDSCAPING WITH SPECIMEN TREES, STONE MONUMENT WALLS AND COMMUNITY SIGNAGE. PART OF OVERALL COMMUNITY LANDSCAPE MAINTAINED BY HOA.
- NATURAL RECEIVER AREAS
OAK TREE RESTORATION AREAS OUTSIDE OF SITE DEVELOPMENT AREAS AS PROPOSED IN THE OAK TREE MANAGEMENT AND PRESERVATION PLAN. MAINTAINED BY THE HOA.
- PRESERVATION AREAS
PROTECTION OF EXISTING OAK TREE GROVES AS PROPOSED IN THE OAK TREE MANAGEMENT AND PRESERVATION PLAN.
- ESTABLISHMENT AREAS
ESTABLISHMENT OF NEW OAK TREE PLANTING AS PROPOSED IN THE OAK TREE MANAGEMENT AND PRESERVATION PLAN.



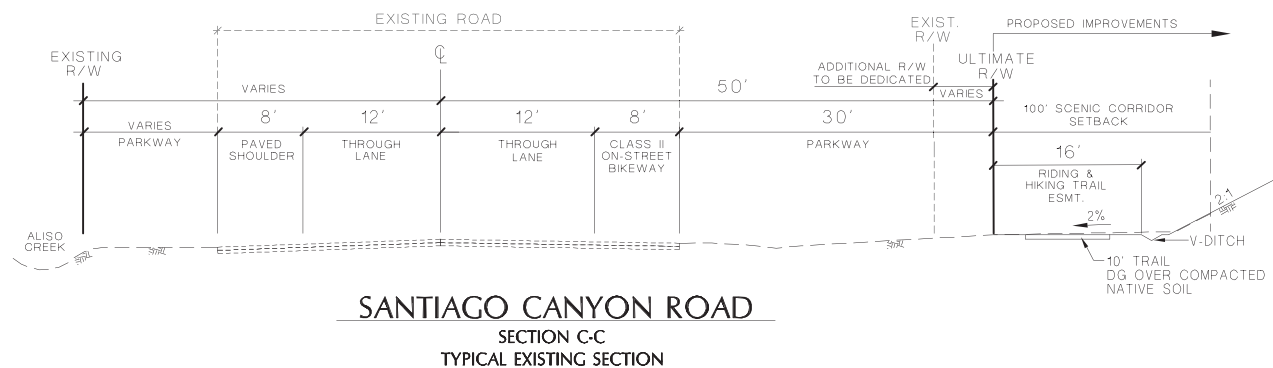
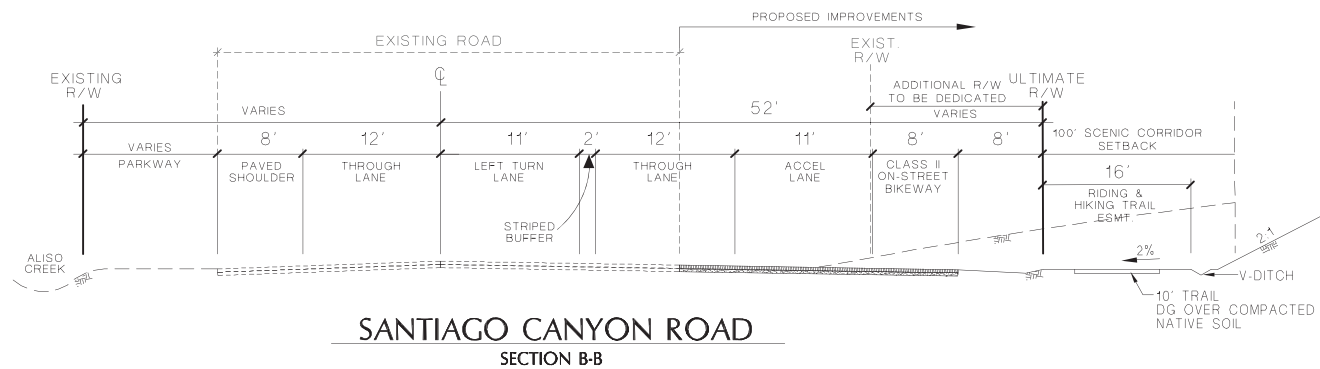
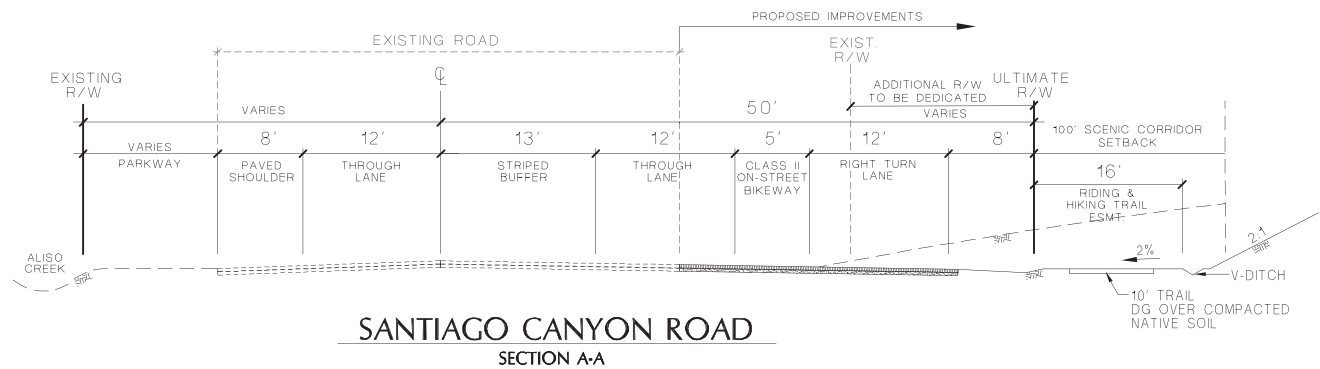
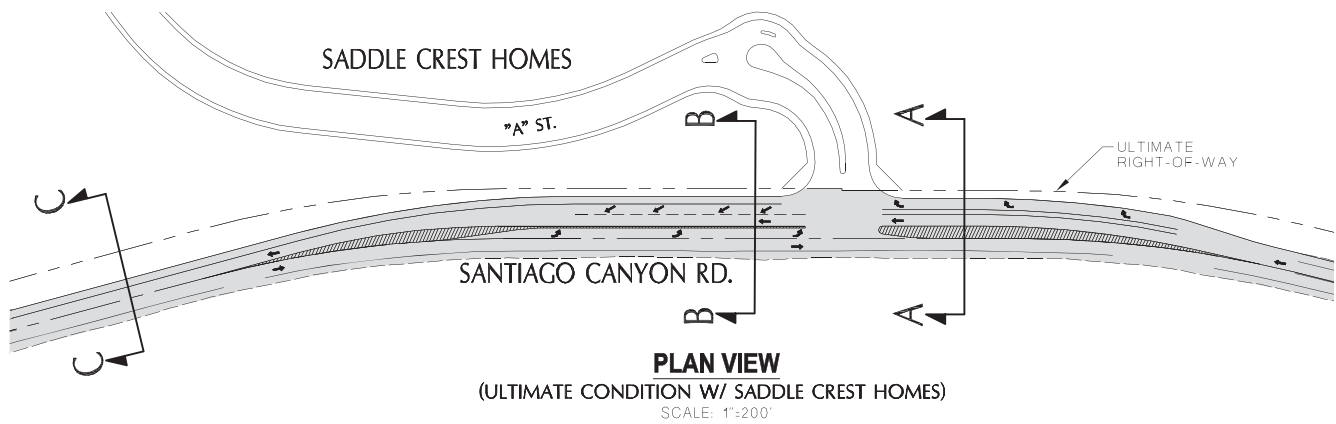
SOURCE: L.A. Group Design Works, 2012.

Saddle Crest Homes . 211454
Figure 2.8
Preliminary Landscape Plan
for Proposed Project



SOURCE: Hunsaker & Associates, 2012.

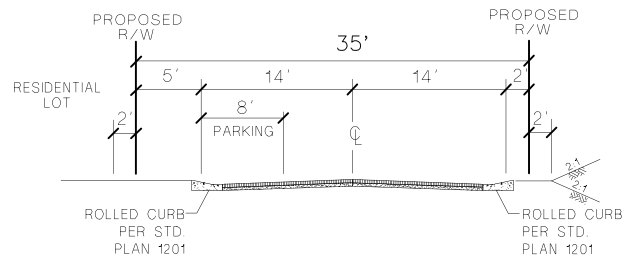
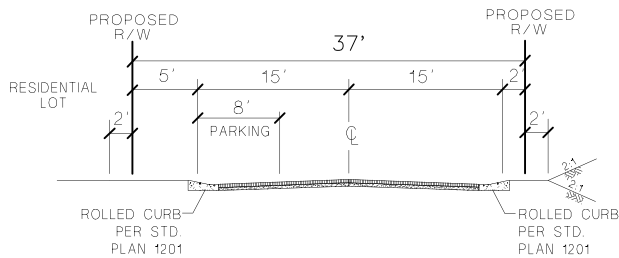
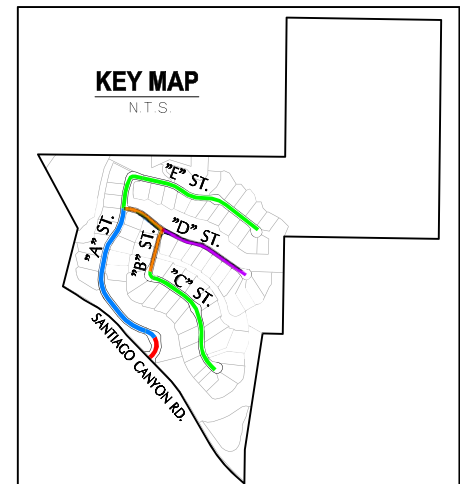
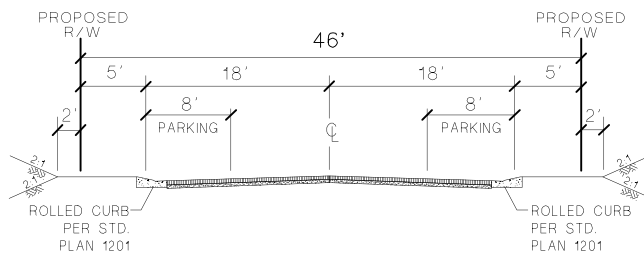
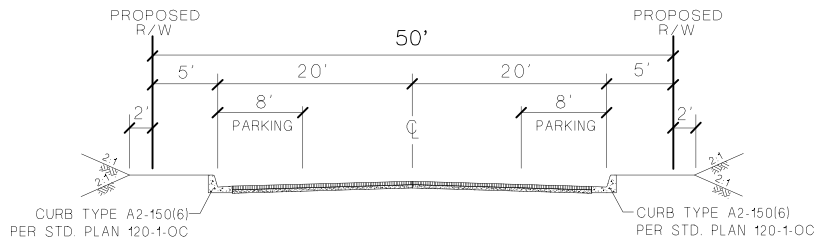
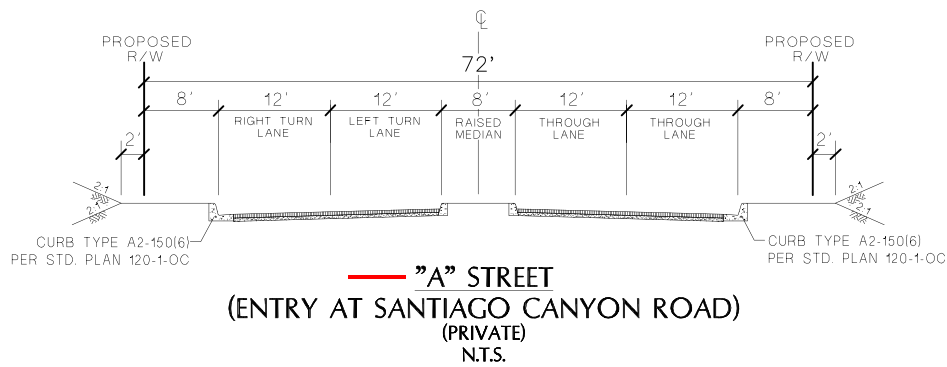
Saddle Crest Homes . 211454
Figure 2.9
Proposed Circulation Plan

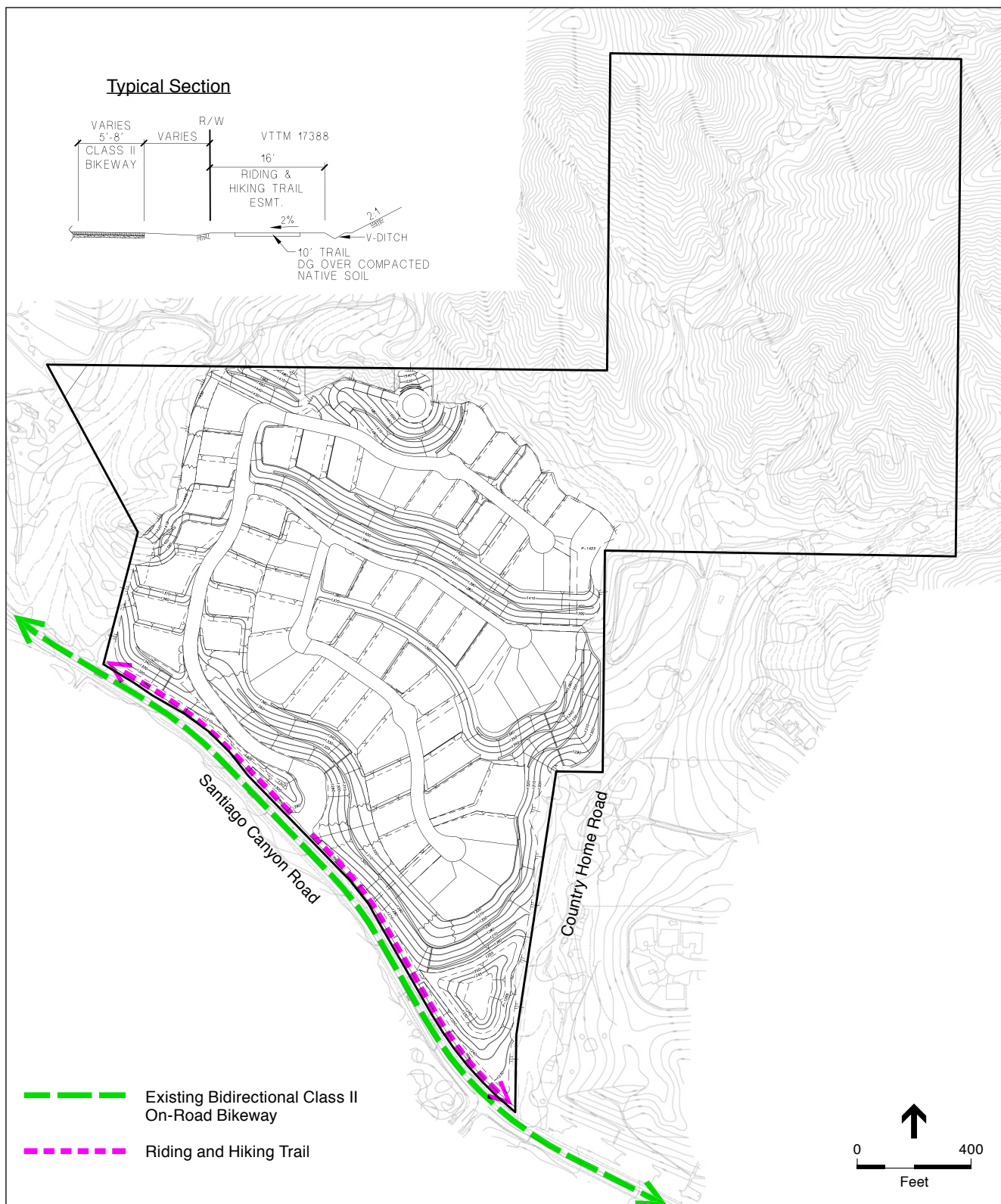


SOURCE: Hunsaker & Associates, 2012.

Saddle Crest Homes . 211454

Figure 2.10
Santiago Canyon Road Improvements





SOURCE: Hunsaker & Associates, 2012.

Saddle Crest Homes . 211454

Figure 2.12
Bikeway and Trail Plan

The project site is within the service boundaries of the Trabuco Canyon Water District (TCWD). The proposed project includes the construction of infrastructure for a new water reservoir (in the form of an aboveground water tank), which would be located in the northern portion of the project site (see Figure 2.3). TCWD has indicated that there is no storage capacity in their existing system, and a new tank would need to be sized to meet the needs of the proposed project. The project alone would require a 910,000 gallon capacity tank, and TCWD estimates that an additional 1,000,000 gallons would be needed as a possible oversize for emergency storage and existing development. Therefore, the project has been designed with a two million gallon tank to accommodate the proposed project and emergency storage (see Appendix L for a copy of the *Saddle Crest Sub Area Master Plan*).

An on-site water pump station would be required to supply water to the project's on-site reservoir (see Figure 2.3). The pump station would allow for water from TCWD's existing system to feed the project's reservoir at a higher elevation with its own storage capacity to serve the project site with a gravity system to meet fire flow and domestic water service requirements. In order to achieve adequate water pressure delivery for the higher elevation lots (a minimum static pressure of 60 pounds per square inch (psi)), two options are being considered. One is development of an on-site booster station similar to the existing Topanga Booster Station, which is located at the Santiago Canyon Estates development east of the project site. The alternative to the on-site water pump station would entail upgrades to the existing Topanga Booster Station, including a 12-inch waterline extension to the project site to supply the reservoir. The off-site 12-inch waterline extension would be constructed from the existing Topanga system, connecting at the end of Wood Canyon Road, across APN 858-021-13 (Matthews) and APN 858-021-21 (Reilly), and connecting to the project site at the end of "E" Street, the northern most cul-de-sac (see Section 3.15, *Utilities*, of this Draft EIR for a discussion of the off-site water line extension).

The proposed project has been designed to incorporate a number of project design features in order to prevent or lessen potentially significant environmental impacts associated with the proposed project (see **Table 2.1**). These project design features were developed to meet the goals of the General Plan and F/TSP. However, it should be noted that not all the project design features are applicable to the non-clustered scenario; for example Project Design Feature PDF-3 states that the project has been designed to cluster the development at the urban edge along Santiago Canyon Road. This project design feature is only applicable to the proposed project.² All project design features will be included in the Mitigation Monitoring and Reporting Program and will be monitored to ensure completion, in the same manner as the project's mitigation measures.

² Note although certain project design features appear similar; each was created to avoid specific impacts to particular resource areas.

TABLE 2.1
PROJECT DESIGN FEATURES

No.	Design Feature
PDF-1	Open space within Saddle Crest Homes accounts for 70 percent of the project site (approximately 79.8 acres). Approximately 51 acres of that open space will be offered for dedication to the County and is adjacent to the Cleveland National Forest, providing a forest buffer, which is a goal of the F/TSP.
PDF-2	<p>Interior private streets have been designed to rural street standards. Depending on whether the street is dual loaded or single loaded with residential lots, the paved widths of interior streets have been designed to vary as follows:</p> <ul style="list-style-type: none"> • Single loaded streets where on-street parking is prohibited to one side of the street: Minimum paved width of 28 feet to 30 feet (measured flowline to flowline). • Dual loaded streets with parking on both sides of the street: Minimum paved width of 36 feet to 40 feet (measured flowline to flowline).
PDF-3	The project has been designed to cluster development at the urban edge along Santiago Canyon Road where development already exists to the south and southeast.
PDF-4	The vesting tentative tract map for the project has been designed to provide easements for scenic/resource preservation purposes over Lots F-L, M, O, P, Q, R, S, T, U, V and a portion of Lot 68 to preserve the areas as open space. The project's homeowners association or a conservation organization will be responsible for the maintenance and upkeep of the open space areas in a manner meeting the approval of the Manager, OC Parks.
PDF-5	The F/TSP scenic corridor setback requirements of 100-feet from Santiago Canyon Road will be maintained. The project is consistent with the design component of the General Plan-adopted Viewscape Typical Section, including an enlarged parkway, a riding and hiking trail and a lack of curbs.
PDF-6	A detailed landscape plan for the project area has been prepared by a licensed landscape architect taking into account County Standard Plans for landscape areas, adopted plant palette guides, applicable scenic and specific plan requirements, and water conservation measures contained in the County of Orange Landscape Code (Ord. No. 09-010).
PDF-7	In accordance with the F/TSP, a Tree Management Preservation Plan has been developed by certified arborists.
PDF-8	In accordance with the Tree Management Preservation Plan, oak tree monitoring will be performed following all tree plantings and relocations within the project site and directly adjacent to the site for a period of seven years. Oak trees will be maintained by the homeowners association as part of the project's CC&Rs.
PDF-9	New slope areas along the exterior of the proposed development area will be revegetated with drought tolerant species. Plant species for revegetation will be in accordance with the F/TSP and Orange County Fire Authority plant palettes and use predominantly native species.
PDF 10	The project has been designed to avoid impacts to cultural resources.
PDF-11	The project has been designed to be contained within a well-defined perimeter. This proposed configuration uses similar slope gradients as the existing conditions; however, the hills will be lowered and the valleys raised. The project grading makes for a more efficient project plan while still maintaining similar topographic characteristics as the existing condition.
PDF-12	The project has been designed so that home sites are situated within areas surrounded by proposed grading which allows for commonly utilized solutions to remediate potential adverse geologic conditions.
PDF-13	The project has been designed so that home sites are situated to avoid adjacency to steep unstable natural slopes; resulting in less remedial grading necessary to stabilize potential geologic hazards.
PDF-14	The project design incorporates rolled curbs and gutters (instead of conventional curb, gutter and sidewalk).
PDF-15	As determined in consultation with the Orange County Fire Authority, the project includes a mid-point flat recovery area for turn-around of fire apparatus on long cul-de-sacs to assure adequate ingress and egress during emergency events.
PDF-16	The project includes a <i>Precise Fuel Modification Plan</i> that has been developed to provide a landscape transition area along the interface between residential development and adjacent open space to provide wildfire protection.

No.	Design Feature
PDF-17	Automatic fire sprinkler systems will be installed for all homes.
PDF-18	The project has been designed with fire hydrants spaced at 300-foot intervals instead of the minimum 600-foot spacing required for homes with automatic fire sprinkler systems.
PDF-19	The project includes a Fire Master Plan that has been approved by the Orange County Fire Authority providing enhanced construction features in certain areas adjacent to fuel modification zones. These include enhanced fire sprinkler systems and construction features per California Building Code Chapter 7A.
PDF-20	In order to minimize project hazards relative to vector control and public health concerns, the water quality basin (dry extended detention basin) will be designed for a maximum 72-hour draw down period for retained runoff. The hydromodification basin will employ approved vector control treatment measures as specified in the California Department of Public Health's recommendations for best management practices for mosquito control in collaboration with the Orange County Vector Control District to mitigate potential vector issues.
PDF-21	The project has been designed so each building site will accommodate three on-site parking spaces to minimize parking along roadways that could interfere with emergency vehicle access.
PDF-22	The project has been designed to cluster homes into a single defensible location, creating a single line of defense around the community, which makes fire protection more effective.
PDF-23	The project has been designed to mimic the hydrological characteristics of the site in its natural, undeveloped state through clustering the home sites, controlling development flows (runoff) with a hydromodification basin and water quality basin (PDF-24), and preserving the site's main drainage along the easterly boundary, thereby adhering to current hydromodification requirements established by the current MS4 permit.
PDF-24	<p>The project has been designed to treat development flows (runoff) with a dry extended detention water quality basin, while implementing the following low impact development techniques:</p> <ul style="list-style-type: none"> • Conservation of natural areas, including existing trees, other vegetation and soils. • Keeping streets at minimum widths and eliminating paved sidewalks in parkways. • Minimizing the impervious footprint of the project. • Minimizing disturbances to natural drainages.
PDF-25	<p>The project will be designed to include the following best management practices to promote infiltration and slow down surface flows:</p> <ul style="list-style-type: none"> • Impervious area dispersion. • Native drought-tolerant landscaping/efficient irrigation.
PDF-26	The project has been designed so that residences include a setback of at least 100 feet from Santiago Canyon Road and would be situated on large depth pads providing enough area for increased setbacks to reduce the impact of roadway noise.
PDF-27	The project has been designed to include landscaping providing additional noise attenuation to homes situated closest to Santiago Canyon Road.
PDF-28	The existing bi-directional Class-II bikeway (on-road striped lanes with parking prohibited) within Santiago Canyon Road will be reconfigured within Santiago Canyon Road to accommodate the turning lanes being provided for the project entry and will vary between five to eight feet, and a 16-foot-wide easement would be provided along the Santiago Canyon Road frontage for the riding and hiking trail.
PDF-29	Interior private streets have been designed to incorporate rural street standards with no sidewalks and rolled curbs (except at the main entry where standard curbs will be used to control drainage).
PDF-30	The project has been designed to include a southbound left-turn lane (300-foot storage length), a northbound right-turn lane (320-foot storage length) and northbound acceleration lane at the project access point on Santiago Canyon Road.
PDF-31	Roads within the project site will be privately owned and maintained and an entry passage feature will be constructed at the project entry. The entry passage feature will be setback from Santiago Canyon Road at a distance that complies with the Orange County Standard Plan No. 1107 (i.e., a minimum of 100 feet from the curb line of Santiago Canyon Road), to provide adequate vehicle stacking space.
PDF-32	A stop sign, stop bar and stop legend will be provided on the project access road at Santiago Canyon Road.

No.	Design Feature
PDF-33	The project has been designed to be consistent with the following design components of the General Plan-adopted Viewscape Typical Section including: an enlarged parkway, a riding and hiking trail, and a lack of curbs.
PDF-34	The project includes a Hydrology Analysis that demonstrates that the proposed development will not overload existing drainage facilities downstream of the project site or exceed existing runoff velocities and peak discharge at discharge points for the 2-, 5-, 10-, 25-, and 100-year storm events.
PDF-35	<p>The project includes a Conceptual Water Quality Management Plan (CWQMP) that has been prepared to identify preliminary best management practices (BMPs), which may be used on-site to control predictable pollutant runoff. The CWQMP has been based on the Orange County Drainage Area Management Plan (DAMP), Model WQMP, Technical Guidance Manual, and the County's WQMP template. The CWQMP includes the following:</p> <ul style="list-style-type: none"> • Detailed site and project description. • A description of potential stormwater pollutants. • Post-development drainage characteristics. • Low impact development (LID) BMP preliminary selection and analysis. • Preliminary structural and non-structural source control BMPs. • Preliminary site design and drainage plan (BMP Exhibit). • GIS coordinates for all proposed LID and treatment control BMPs. • Preliminary Operation and Maintenance Plan that: (1) describes the long-term operation and maintenance requirements for BMPs identified in the BMP Exhibit; (2) identifies the entity that will be responsible for long-term operation and maintenance of the referenced BMPs; and (3) describes the mechanism for funding the long-term operation and maintenance of the referenced BMPs.
PDF-36	In order to comply with the MS4 permit, the water quality basin (dry extended detention basin) will be designed for a maximum 72-hour draw down period for retained runoff to mitigate potential vector issues. The hydromodification basin will employ approved vector control treatment measures as specified in the California Department of Public Health's recommendations for best management practices for mosquito control in collaboration with the Orange County Vector Control District to mitigate potential vector issues.
PDF-37	The project will incorporate the use of pervious pavers and roof drains connected to pervious areas.
PDF-38	The project has been designed to include a recreational trail for riding and hiking purposes along Santiago Canyon Road.
PDF-39	Homes within the project site will include the installation of a fire alarm system.
PDF-40	The project has been designed to include either an on-site pump station or upgrading and connecting to the off-site Topanga Booster Station to provide sufficient fire flow pressure for the upper portions of the project.
PDF-41	The project includes a water storage tank, to provide emergency storage to the residents of the project. The site may also be expanded to provide the Trabuco Canyon Water District with additional capacity to help achieve their emergency storage goals.
PDF-42	Best management practices will be incorporated into the project to ensure that indirect impacts (i.e., edge effects) are avoided or minimized to the maximum extent possible. Lighting will be pointed away from the wildlife corridor and ambient light levels will be minimized to the maximum extent practicable. Additionally, the project's Water Quality Management Plan and Stormwater Pollution Prevention Plan will ensure that project runoff will not adversely affect the drainage within the wildlife corridor. Noise standards will follow County Codes and General Plan Policies. In addition, exterior lighting will not be used in the 50-foot setback area for the wildlife corridor and fencing will be limited to open fencing that does not exceed 40 inches in height. Vegetation thinning within the fuel modification area that is encroaching into the corridor will only occur on occasion and during daylight hours.
PDF-43	<p>Short-term construction-related noise impacts will be reduced by the implementation of a number of measures including the following:</p> <ul style="list-style-type: none"> • During all excavation and grading on-site, the construction contractors will equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent practicable. The construction contractor will place all stationary construction equipment so that

No.	Design Feature
	<p>emitted noise is directed away from the wildlife movement corridor staging areas will not be placed in proximity to the wildlife corridor.</p> <ul style="list-style-type: none"> The construction contractor will stage equipment in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors (the wildlife movement corridor and preserved habitat areas) during all project construction. All construction work will occur during the daylight hours. The construction contractor will limit all construction-related activities that would result in high noise levels according to the construction hours to be determined by the County. The construction contractor will limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes will not pass through sensitive land uses or residential dwellings
PDF-44	The preliminary plant list was reviewed, and with the proposed plant palette, a native plant species buffer will serve as a barrier to minimize the risk of introducing invasive, exotic species near the corridor. In addition, signs will be installed to educate future residents of the project about the wildlife corridor and ensure that trash, debris, and disturbance by trespassing or dogs are not permitted within or near the corridor.
PDF-45	Protection measures for oak trees include fencing and protection of oak trees adjacent to construction areas. In addition, placement of fill, storage of equipment, and grading shall be prohibited within the dripline of any tree proposed for preservation. Retaining walls will be used to protect oaks proposed for preservation from surrounding cut and fill, and no surfaces will be placed within a six-foot radius of oak tree trunks per the requirements of the F/TSP; any retaining walls will be placed outside of the root zone of the oak tree to be preserved.
PDF-46	Although portions of the study area are within the Congressional boundaries of the Cleveland National Forest and therefore are not covered under the NCCP/HCP, the removal of coastal sage scrub communities will be conducted in compliance with the Construction Minimization Measures identified in the NCCP/HCP.
PDF-47	The project reservoir will be visually screened with native/drought-tolerant landscaping and will be painted a neutral tone to blend with the surrounding environment.
PDF-48	The project has been designed so that stormwater will be collected and cleansed through a first flush treatment system.
PDF-49	<p>The Preliminary Landscape Plan for the project has been designed to:</p> <ul style="list-style-type: none"> Preserve open space areas and create new landscaping that would assist in carbon intake and minimize surface water runoff. Incorporate the use of native/drought tolerant plant materials. Utilize only a small percentage of turf in the common area landscape.
PDF-50	The project site is located adjacent to a Class II bikeway.

Non-Clustered Scenario

In addition to the proposed project, the Draft EIR evaluates the impacts of the non-clustered scenario, which also includes 65 single-family homes. The non-clustered scenario establishes housing sites and open space interspersed across the entire project site (see **Figure 2.13**), and not clustered like the proposed project.



Note: This exhibit does not reflect the limits of fuel modifications and remedial grading.

SOURCE: Hunsaker & Associates, 2011.

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Figure 2.13
Non-Clustered Scenario

Under the non-clustered scenario, the homes would be custom and it is anticipated that they would be built in groups of five homes every six months until the project site is built out. Construction of homes under the non-clustered scenario would be determined by individual buyers and are anticipated to occur in a more scattered pattern.

Residential lots and open space area would be dispersed throughout the site, which would minimize landform alteration (cut and fill) to create building pads. Grading for the major road through the site would occur at the beginning of construction, and home sites along the main road would also be graded at that time. Other home sites located away from the main roadway would require separate grading permits at the time of development. However, for the purposes of this analysis, the maximum impact area for each lot is analyzed in this EIR, in order to determine potential impacts associated with the non-clustered scenario.

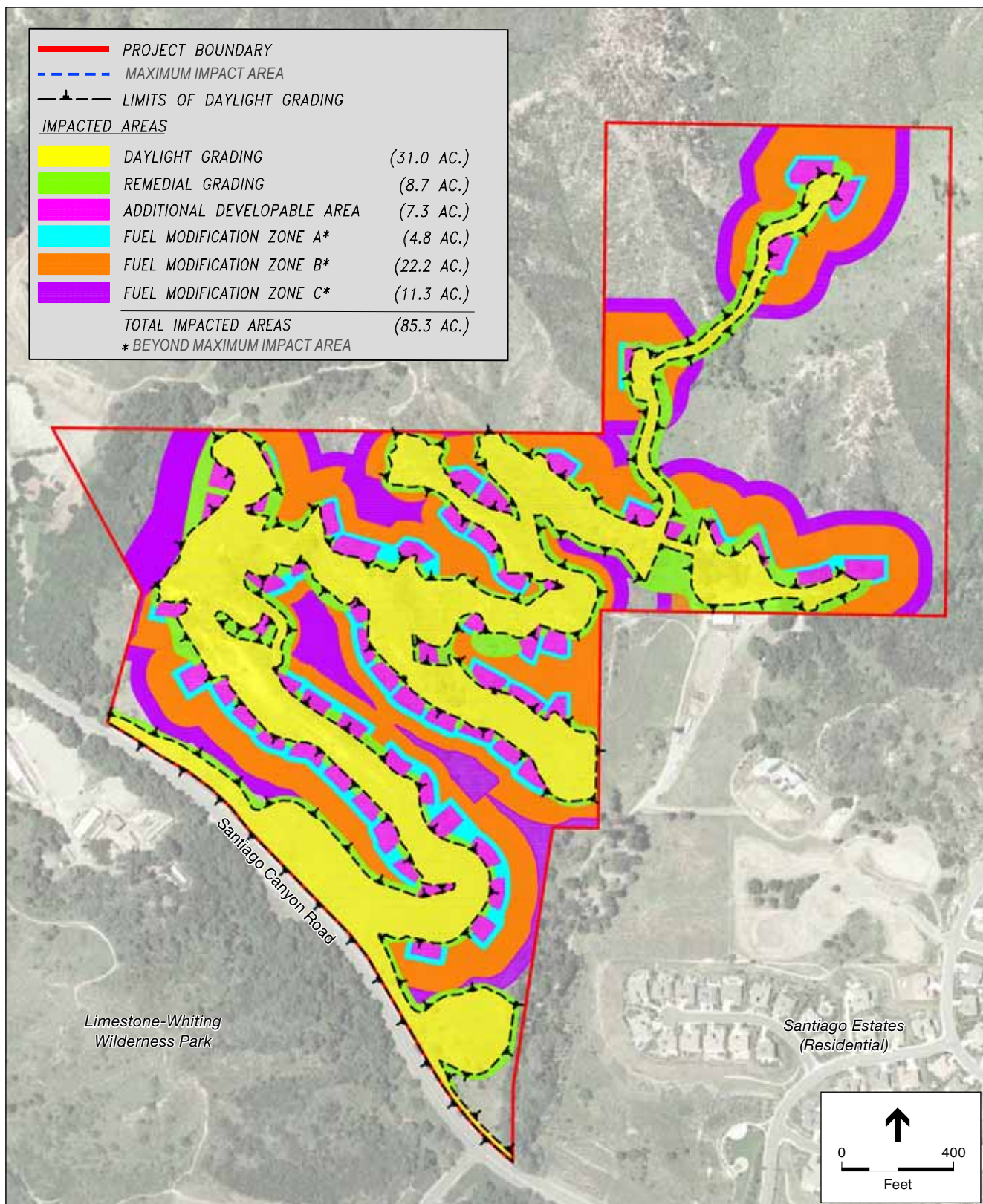
The non-clustered scenario has been included in order to provide a clear analysis of the impacts that would occur if the project site was developed consistent with the existing F/TSP. Because it is designed to be consistent with the existing F/TSP, it would not require amendment(s) to the F/TSP. It should be noted, that although the non-clustered scenario is being analyzed in greater detail than other alternatives to the proposed project (see Chapter 4.0, *Alternatives*, of this Draft EIR), certain project information for the non-clustered scenario has not been developed to the same level of detail as the proposed project.

Under the non-clustered scenario, approximately 66 percent of the site (75.4 acres) would remain as open space (including remedial grading, revegetated areas, and fuel modification zones). As shown in **Figure 2.14**, total impacted areas associated with development of the non-clustered scenario would be approximately 85.3 acres. Of that total disturbed area, approximately 38.3 acres would be associated with fuel modification zones, 8.7 acres for remedial grading, and an additional 7.3 acres of other developable areas.³

Open space would be distributed throughout the project site, as opposed to being concentrated mainly in the northeastern portion under the proposed project. The non-clustered scenario would not include a dedication of acreage to the County of Orange for open space purposes. The open space that would be included in the non-clustered scenario would be provided within each residential lot (see Figure 2.14).

The non-clustered scenario would include seven water quality and hydromodification basins to treat and control potential runoff. Similar to the proposed project water service would be provided by TCWD by a new water reservoir and associated pump station improvements, or alternatively via an off-site waterline extension.

³ The precise boundaries of development/fuel modification areas/remedial grading may shift if a tract map were to be prepared for the non-clustered scenario; however, the maximum impact area would not change.



SOURCE: Hunsaker & Associates, 2012.

NOTE: The precise boundaries of development/fuel modification areas/remedial grading may shift if a tract map were to be prepared for the non-clustered scenario; however, the maximum impact area would not change.

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Figure 2.14
Grading Impact Areas
Non-Clustered Scenario

2.6 Construction Activities

Proposed Project

Construction activities for the proposed project would occur in the following phases: (1) site clearing and grading; (2) construction of roadways, utilities and finished lots; and (3) construction of homes. It is anticipated that the proposed project would require approximately 1.9 million cubic yards of excavation (includes approximately 1.1 million cubic yards of raw earthwork and approximately 800,000 cubic yards for remedial grading) and would be balanced on-site. Daily excavation would not exceed 20,000 cubic yards. The limits of grading for the proposed project are shown in Figure 2.5.

Construction of the proposed project is anticipated to begin the second quarter of 2013, with the first two phases being completed by the last quarter of 2013. Phase 1 of construction would occur over Month 1 through Month 6, with Phase 2 beginning during Month 4. Phase 3 which includes the construction of homes would begin the first quarter of 2014, with an average of 15 homes being constructed every six months, starting with lots located in the southern portion of the site and working north. The proposed project is anticipated to be completed by 2016. However, this is dependent on economic factors at the time of construction. Pursuant to the County's Noise Ordinance, construction activities would be limited to the hours between 7:00 A.M. to 8:00 P.M., Monday through Saturday, excluding federal holidays.

Non-Clustered Scenario

It is anticipated that the non-clustered scenario would require approximately 725,000 cubic yards of excavation and would require the exportation of approximately 78,500 cubic yards of soil (includes approximately 242,200 cubic yards of raw earthwork and 482,800 for remedial grading). As discussed above, grading for the major road through the site would occur at the beginning of construction and home sites along the main road would also be graded at that time. Other home sites located away from the main roadway would require separate grading permits at the time of development.

Daily excavation would not exceed 8,000 cubic yards. It is anticipated that the exported soils would be hauled from within a 20-mile radius of the project site. The fill materials would be exported from the site in haul trucks with a capacity of 15 cubic yards. Typical hauling schedule would include up to 200 trucks per day (8:00 A.M. to 5:00 P.M.) for the non-clustered scenario. The limits of grading for the non-clustered scenario are shown on Figure 2.14.

Construction of the non-clustered scenario would also begin in the second quarter of 2013, with the first two phases being completed by the last quarter of 2013. Similar to the proposed project, Phase 1 of construction would occur over Month 1 through Month 6, with Phase 2 beginning during Month 4. Under the non-clustered scenario, construction of homes (Phase 3) would begin the first quarter of 2014, with an average of five homes being constructed every six months. As

the non-clustered scenario would be all custom homes, development would be scattered depending on the needs of the individual home buyer. The non-clustered scenario is anticipated to be completed by mid-2020. However, similar to the proposed project, this is dependent on economic factors at the time of construction. Pursuant to the County's Noise Ordinance, construction activities would be limited to the hours between 7:00 A.M. to 8:00 P.M., Monday through Saturday, excluding federal holidays.

2.7 Project Approvals and Intended Uses of the EIR

Proposed Project

The proposed project includes a request for approval of the following discretionary and other implementing approvals:

- Amendments to the F/TSP and General Plan.
- An Area Plan to provide for the orderly development of the project site in accordance with the F/TSP, as amended, and County of Orange Zoning Code (see Appendix B).
- Vesting Tentative Tract 17388 for subdivision of Saddle Crest Homes.
- Site Development Permit(s) (required prior to the approval of grading permit).
- Grading Permit(s) (required prior to clearance of vegetation and earthwork on the project site).

The General Plan and F/TSP amendments that have been proposed are summarized below:

General Plan Amendments

- Amend the Transportation Element of the General Plan, TIM, to provide that the level of service policy for Santiago Canyon Road will be implemented by evaluating peak hour volumes in relation to the physical capacity of the road using the Volume-to-Capacity methodology.
- Amend language in the General Plan relating to the F/TSP to indicate that development should be designed to maintain a buffer with the Cleveland National Forest, be compatible with adjacent areas, and be compatible with other goals of the F/TSP.
- Include a new section describing the County's role in interpreting and implementing the General Plan and Specific Plans.

F/TSP Amendments

- Acknowledge the changes that have occurred with respect to environmental planning (such as biological mitigation, fire management and hydromodification) as well as changes that have occurred in the County and to planning/regulatory documents since the adoption of the F/TSP.
- Add an objective to the F/TSP to recognize that the plan provides for alternative approaches relating to grading in order to reduce impacts to biological resources, increase

on-site open space, and/or further the F/TSP's goal of providing a buffer between urban development and the Cleveland National Forest, while ensuring that major ridgelines and major rock outcroppings are preserved as provided in the Resources Overlay Component.

- Modify F/TSP provisions relating to oak tree mitigation to modify the standards governing transplantation of oak trees so that large trees removed for development need not be transplanted if they would not survive transplantation or are in poor health and to allow oak trees to be replaced under either the tree replacement scale or an approved Tree Management and Preservation Plan that would provide equally effective mitigation.
- Amend provisions of the UAR District Regulations to provide that the County has the authority to approve alternative Site Development Standards relating to building site area and grading if the development plan would result in greater overall protection of environmental resources than would result if the Development Plan fully complied with those Site Development Standards within the unamended F/TSP. This amendment would provide the ability to cluster development to better accomplish goals of the F/TSP.
- Amend a provision in the UAR District Regulations to confirm that grading is allowed during initial development in areas that will be designated as open space after completion of development.

In addition, the following non-County approvals may be required for the proposed project:

- Approval of Street Improvement Plans and issuance of Encroachment Permit by the City of Lake Forest for proposed improvements to Santiago Canyon Road right-of-way
 - California Department of Fish and Game (CDFG): 1603 Streambed Alteration Agreement
 - U.S. Army Corps of Engineers (USACOE): Section 404 Permit
 - California Regional Water Quality Control Board (RWQCB): Section 401 Water Quality Certification
- Orange County Fire Authority (OCFA): Fuel Modification Plan and Fire Master Plan ⁴

Non-Clustered Scenario

The non-clustered scenario would include approval of the following discretionary and other implementing approvals:

- General Plan Amendments.
- An Area Plan to provide for the orderly development of the project site in accordance with the F/TSP, as amended, and County of Orange Zoning Code.
- A Vesting Tentative Tract map for subdivision of Saddle Crest Homes.
- Site Development Permit(s) (required prior to the approval of grading permit).

⁴ The Fuel Modification Plan was approved on January 11, 2011, and the Fire Master Plan was approved by OCFA on January 28, 2010.

- Grading Permit(s) (required prior to clearance of vegetation and earthwork on the project site).

In addition, the following non-County approvals may be required for the non-clustered scenario:

- Approval of Street Improvement Plans and issuance of Encroachment Permit by the City of Lake Forest for proposed improvements to Santiago Canyon Road right-of-way
- CDFG: 1603 Streambed Alteration Agreement
- USACOE: Section 404 Permit
- RWQCB: Section 401 Water Quality Certification
- OCFA: Fuel Modification Plan and Fire Master Plan

Because the non-clustered scenario is consistent with the adopted F/TSP, amendments to the document are neither required nor proposed.

2.8 Cumulative Development

Cumulative impacts refer to the combined effect of project impacts with the impacts of other past, present, and reasonably foreseeable probable future projects. Both CEQA and the *CEQA Guidelines* require that cumulative impacts be analyzed in an EIR. As set forth in the *CEQA Guidelines* Section 15130(b), “the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone.”

According to Section 15355 of the *CEQA Guidelines*,

“‘Cumulative impacts’ refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

- a) The individual effects may be changes resulting from a single project or a number of separate projects.
- b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

Therefore, the cumulative discussion in this EIR focuses on whether the impacts of the proposed project and the non-clustered scenario are cumulatively considerable within the context of impacts caused by other past, present, and reasonably foreseeable future projects.

CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of the following:

- A list of past, present and probable future projects producing related or cumulative impacts, including those projects outside the control of the lead agency; or

- A summary of projections contained in an adopted local, regional or statewide plan or related planning document that describes or evaluates conditions contributing to the cumulative effect.

Cumulative impact discussions for each issue area are provided in the technical analysis contained within Chapter 3.0 and use the methods described above. **Table 2.2** provides a list of the projects that are considered in this cumulative environmental analysis, including development projects planned in the project area (within the F/TSP), and those in adjacent cities. This list has been compiled based on information provided by the County, and the cities of Lake Forest, Rancho Santa Margarita and Mission Viejo.

**TABLE 2.2
CUMULATIVE PROJECT LIST**

	Name/Address	Description	Status
County of Orange Projects			
1	Watson Parcel	98 acres with 48 single-family dwelling units allowed under the F/TSP.	No current applications
2	Saddleback Meadows	266 single-family lots on an approximate 222-acre site.	Approved
3	Robinson Ridge	198 single-family homes on an approximate 89-acre site.	NOP has been distributed (2009)
4	Red Rock Chateau (PA080053)	Use Permit to allow for development of existing single-family dwelling for special events for a maximum of 20 days per year. A Use Permit to allow parking in unpaved parking lot and tandem parking spaces is also proposed.	Application filed
5	Crocker Property (PA090009)	Area Plan to allow for subdivision of site into four one-acre parcels in compliance with RHE-1 Zoning classification.	Application filed
6	Giracci Vineyard (PA090011)	Use Permit to allow for additional uses and structures and special events for up to 300 persons, with 29 marked parking stalls available and 13,000 square foot overflow meadow parking (Valet) and some additional parking on Jackson Ranch Road.	Approved ⁵
7	Carbondale Ranch (PA100043)	Use Permit and Site Development Permit to allow for operation of commercial stable.	Application filed
8	Rancho Las Lomas (PA080051)	Use Permit to legitimize Rancho Las Lomas including unpermitted grading, construction and operation of wedding chapel, bed and breakfast/guest cottages, retreat conference center, caretaker's residence and botanical and zoological gardens, plus sewer lines in Aliso Creek.	Existing uses Application filed
9	Reinhart Property (TPM2010102)	Tentative Parcel Map to create separate legal building site for home under construction – no new building sites will be created.	Application filed
10	Lang Property (PA070006)	Area Plan to allow for the development and Subdivision of one lot into six lots.	Application filed

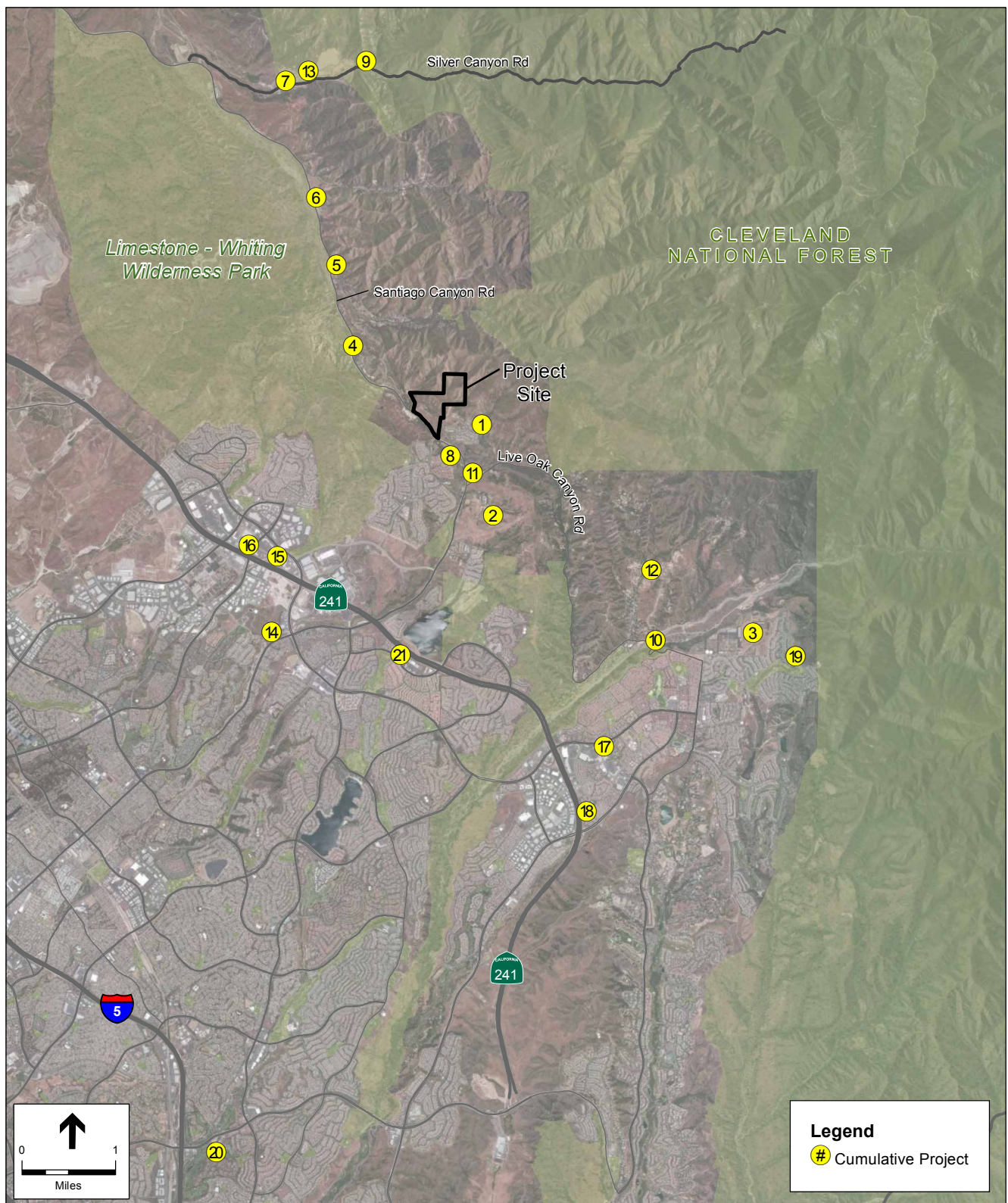
⁵ Currently in litigation.

	Name/Address	Description	Status
11	Cook's Corner (PA090025)	Use Permit/Site Development Permit to establish Cook's Corner Sign Program comprised of two monument signs and existing wall signs; legitimize outdoor weekend and holiday retail sales, and outdoor dining, and off-street parking.	Approved
12	Johnson Residence (PA110059)	Area Plan and Site Development Permit for new single-family dwelling on vacant lot	Application filed
13	St. Michael's Abbey at Holtz Ranch (PA120001)	Use Permit and Site Development Permit to allow for the establishment and development of a monastery/church and a private school.	Application filed
City of Lake Forest			
14	Sports Park	90 acres of active and passive park facilities including a recreation center, amphitheater, parking and restroom facilities.	Approved; construction anticipated August 2012
15	Portola Center	Development of approximately 243 acres to include up to 930 homes, parks, and mixed uses.	Under review
16	Kaiser Permanente	Development of approximately 36,000 square foot medical office building.	Approved; buildout anticipated January 2013
City of Rancho Santa Margarita			
17	BJ's Restaurant	Single story 360-seat restaurant.	Constructed December 2011
18	RSM Townhomes	66 multi-family units.	Approved
19	Highland Estates	Eight single-family units.	Approved
City of Mission Viejo			
20	Andalucía Mission Viejo	256 multi-family units.	Approved
21	Los Alisos Townhomes	230 apartments on 10 acres.	Approved

SOURCE: County of Orange, 2011; City of Lake Forest 2012; City of Rancho Santa Margarita, 2012; City of Mission Viejo, 2012.

Figure 2.15 provides the location of projects considered in the cumulative analysis. Cumulative projects are those projects that are in various stages of the application and approval process, but have not yet been constructed or were not constructed at the time the NOP was published.

Generally, the cumulative analysis is based on build out of the F/TSP. However, for some environmental issues this has been augmented by the current list of projects for which applications have been submitted (see Table 2.2), the General Plan and other plans that apply to a specific environmental issue area. For example, the cumulative analysis for air quality is based on information provided by South Coast Air Quality Management District (SCAQMD) through their Air Quality Management Plan. The assumptions regarding cumulative analyses are described under *Cumulative Impacts* in each topical section in Chapter 3.0.



SOURCE: Bing Maps, 2010. ESA, 2011.

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Figure 2.15
Cumulative Projects